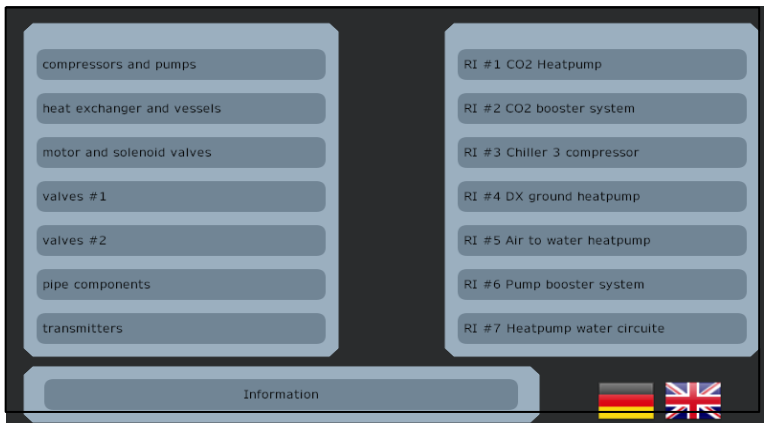
Sample Templates Document: HVAC_Symbol01.blu



Document copyright policy:

All pertinent state, regional, and local safety regulations must be observed when installing and using this product. For reasons of safety and to help ensure compliance with documented system data, only the manufacturer should perform repairs to components.

When devices are used for applications with technical safety requirements, the relevant instructions must be followed.

Failure to use Schneider Electric software or approved software with our hardware products may result in injury, harm, or improper operating results.
Failure to observe this information can result in injury or equipment damage.

Safety Information

Important Information

NOTICE

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of this symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result** in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

PLEASE NOTE

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

About the Book

At a Glance

Document Scope

This manual describes how to use this product.

Validity Note

This documentation is valid for this product.
The technical characteristics of the device(s) described in this manual also appear online at *http://www.pro-face.com*.

The characteristics presented in the present document should be the same as those that appear online. In line with our policy of constant improvement we may revise content over time to improve clarity and accuracy. In the event that you see a difference between the document and online information, use the online information as your reference.

Registered Trademarks

Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and/or other countries.

Product names used in this manual may be the registered trademarks owned by the respective proprietors.

Related Documents

You can download the manuals related to this product, such as the software manual, from our support site at *http://www.pro-face.com/trans/en/manual/1001.html*.

Product Related Information

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

In the event this product does not run properly due to whatever reason, it may be difficult or impossible to identify a function. Functions that may present a hazard if not immediately executed, such as a fuel shut-off, must be provided independently of this product. The machine's control system design must take into account the operator being unable to control the machine or making mistakes in the control of the machine.

⚠ WARNING

UNINTENDED EQUIPMENT OPERATION

The application of this product requires expertise in the design and programming of control systems. Only persons with such expertise should be allowed to program, install, alter, and apply this product.

- Follow all local and national safety standards.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

For additional information, refer to NEMA ICS 1.1 (latest edition), "Safety Guidelines for the Application, Installation, and Maintenance of Solid State Control" and to NEMA ICS 7.1 (latest edition), "Safety Standards for Construction and Guide for Selection, Installation and Operation of Adjustable-Speed Drive Systems" or their equivalent governing your particular location.

Table of Content

Target: ST-6500WAD

Driver: None

BLUE version 3.4.1 or later

Template Overview

This template has Different Buttons to open HVAC Screens.

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Project structure

23 different screens are called in Main Screen.

Screen	
Main	Screen ID 1
Information	Screen ID 2
Compressor_and_Pumps	Screen ID 10
Heat_exchanger_and_vessels	Screen ID 11
Motor_and_Solnoid_Valves	Screen ID 12
Valves_Filling	Screen ID 13
Valves_Filling_2	Screen ID 14
Pipe_components_Filled	Screen ID 15
Sensors	Screen ID 16
AHU_objects	Screen ID 17
RI_CO2_Heatpump	Screen ID 20

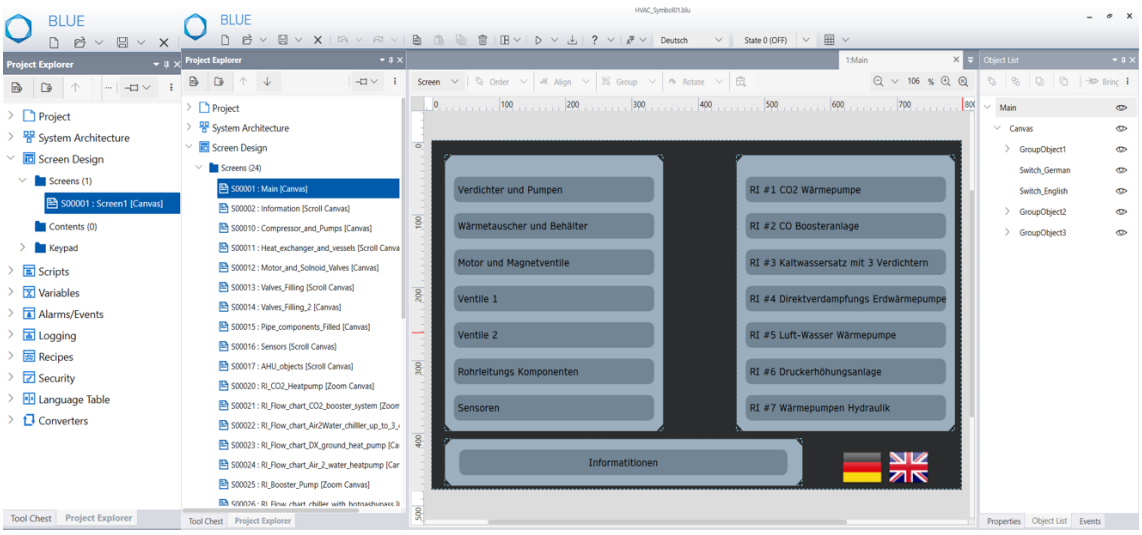
RI_Flow_chart_CO2_booster_system	Screen ID 21
RI_Flow_chart_Air2Water_chillller_up_to_3_comp	Screen ID 22
RI_Flow_chart_DX_ground_heat_pump	Screen ID 23
RI_Flow_chart_Air_2_water_heatpump	Screen ID 24
RI_Booster_Pump	Screen ID 25
RI_Flow_chart_chiller_with_hotgasbypass	Screen ID 26
RI_Flow_Chart_heating_circuite	Screen ID 27
RI_Flow_chart_simple_ref_circuit	Screen ID 91
RI_Flow_chart4	Screen ID 92
Screen1	Screen ID 93
RI_Chiller_pump_part1	Screen ID 94
RI_Chiller_pump_part	Screen ID 95
RI_Chiller_pump_part2	Screen ID 96

Run Time Behavior

Runtime/Simulation of this template displays buttons of compressor, pumps, vessels, heat exchanges, transmitter, booster system, chill compressor, heat pump water circuit.
Click above buttons to open desired HVAC screens.
Click on First Flag button to Change Language in German.
Click on Second Flag button to Change Language in English.
Click on Information button to See information.

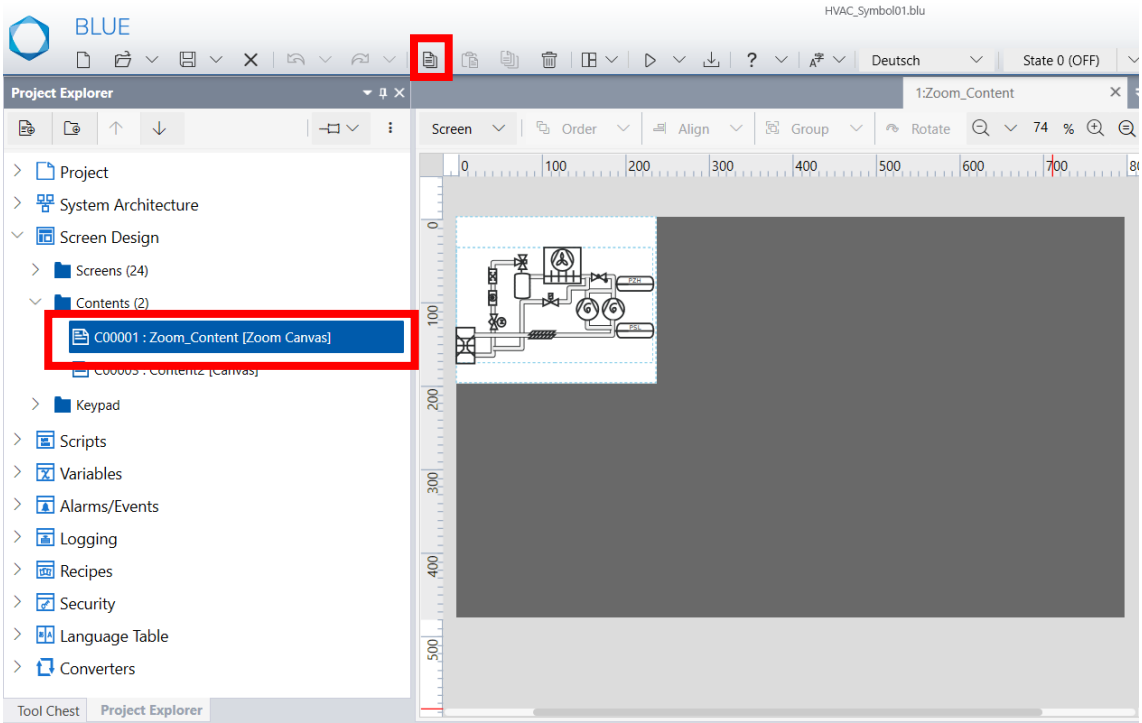
How to copy the objects to your project file

1. Open your project file and downloaded project file simultaneously.



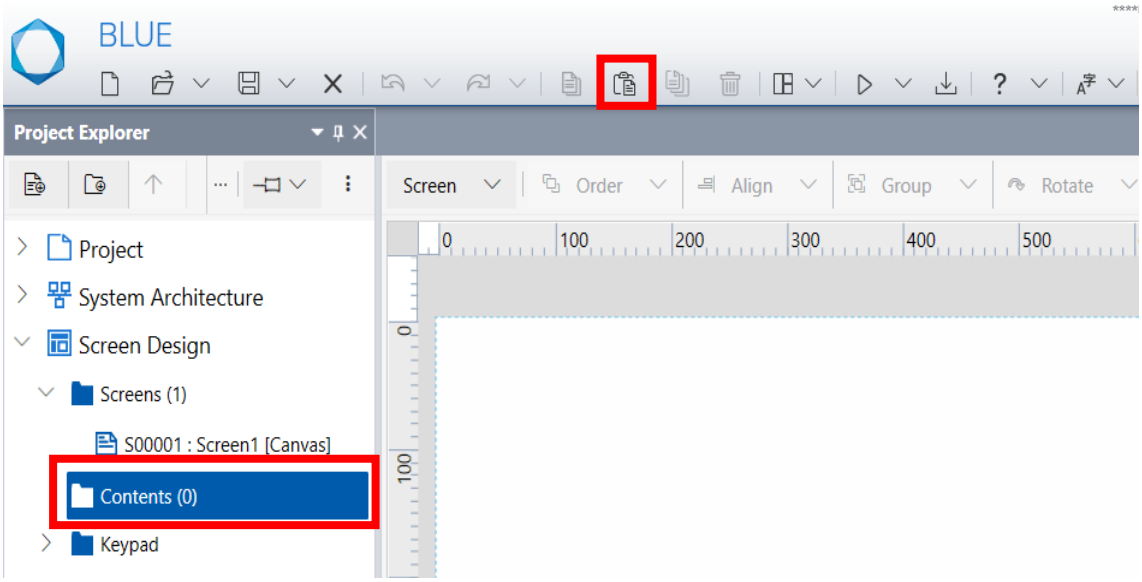
2. Open the downloaded project file.

   Click the Content:C00001 from “Contents” and copy the Dialog content using  copy icon from the global Toolbar.



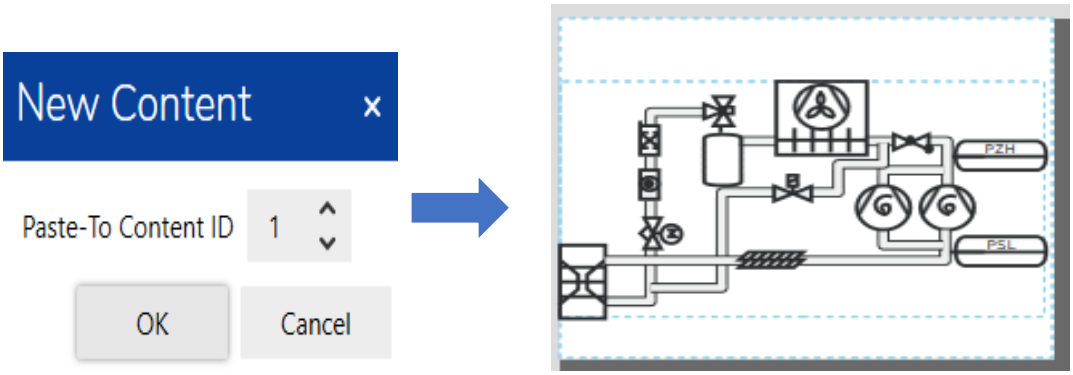
3. Open your project file.

   Click “Contents” and then click on the paste icon from the global Toolbar.



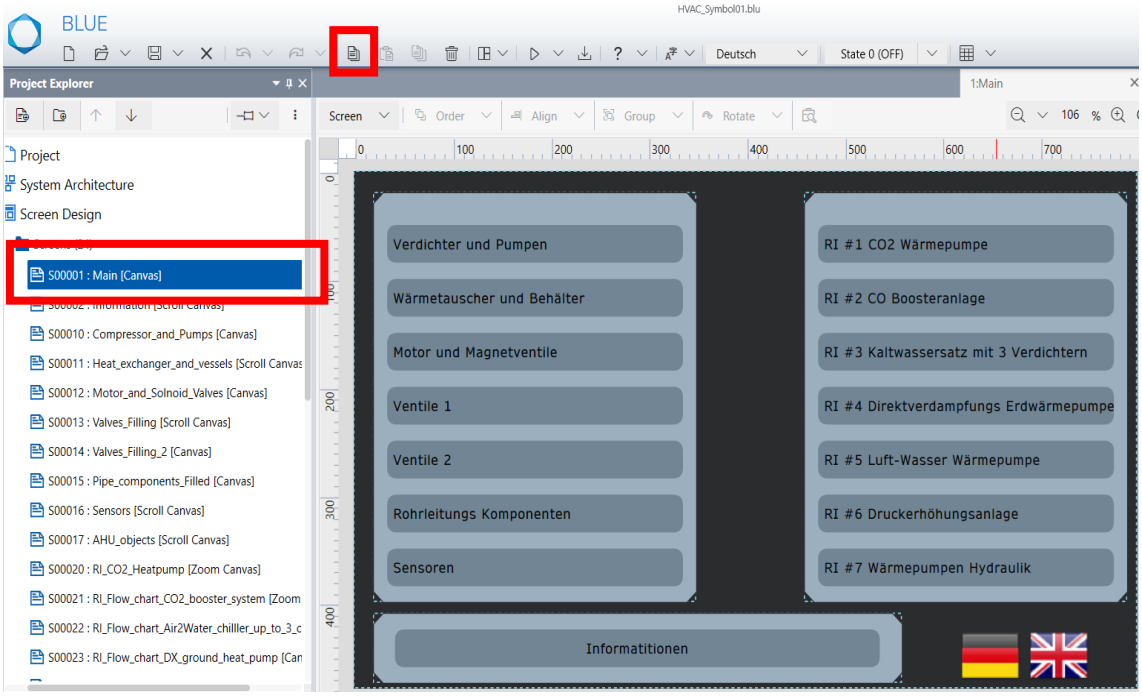
4. Select desired content ID and click “OK”.

   Result: Copied content is successfully pasted in your project.

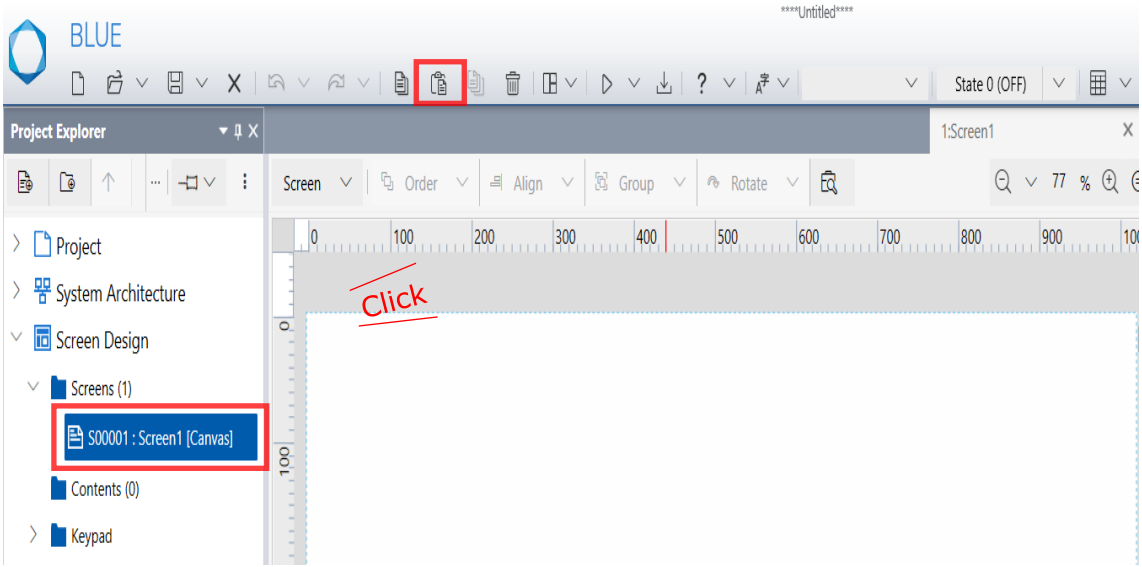


5. Repeat the above step for remaining content.

6. Open the downloaded project file and select the Screen S00001: Main.

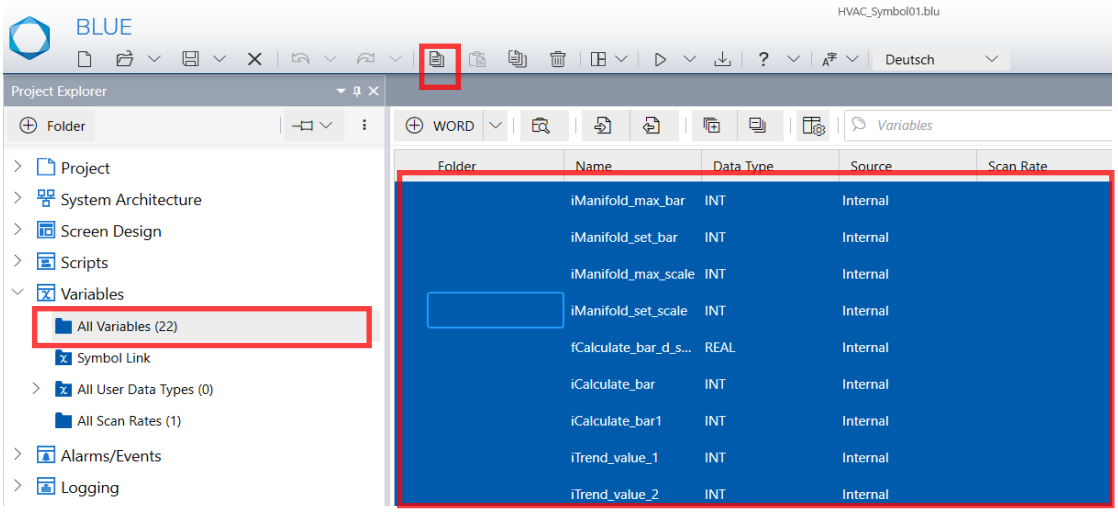


7. Open your project file, Select the screen that you want to paste it.
Click on the screen area and then paste it using the paste icon from the global Toolbar.

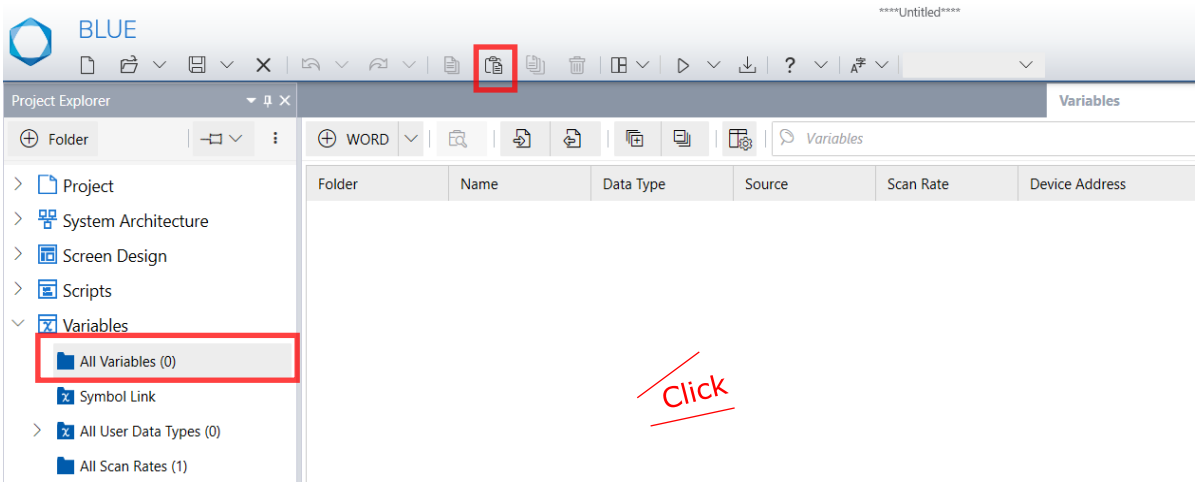


8. Repeat the above step 6 and 7 for remaining screens.
   Note: You can copy All screens and Paste at a time.

9. Open downloaded project file and select “All variables”. Select all the displayed variables and click the copy icon from global Toolbar.

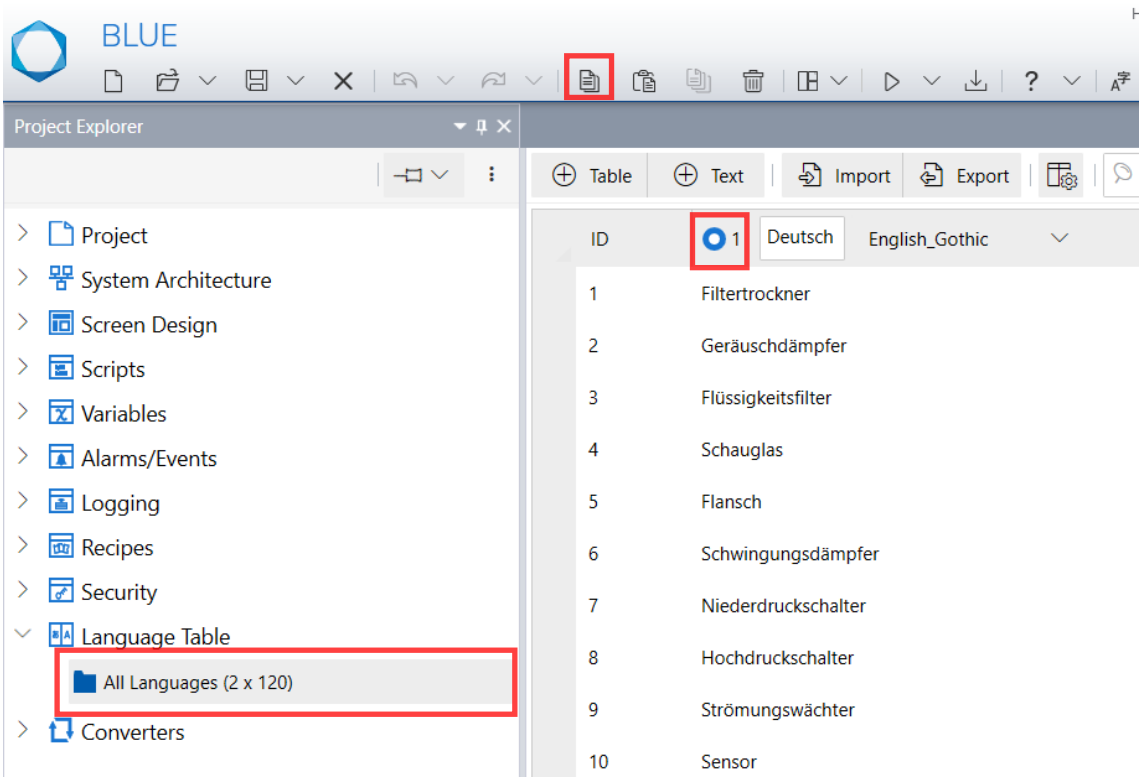


10. Open your project file and select “All variables”. Click on the variable screen and click paste icon from the global Toolbar.

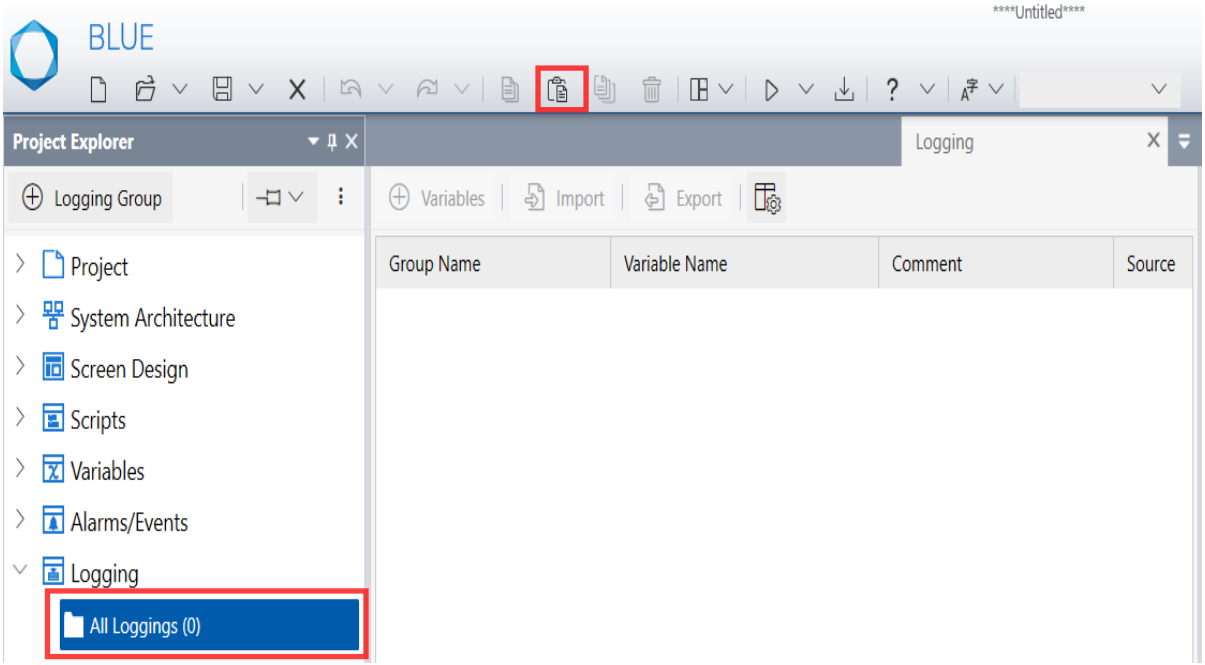


Note: You can also create your own variables to bind with Dialog. For more details, refer [How to change HAVC Variables.]

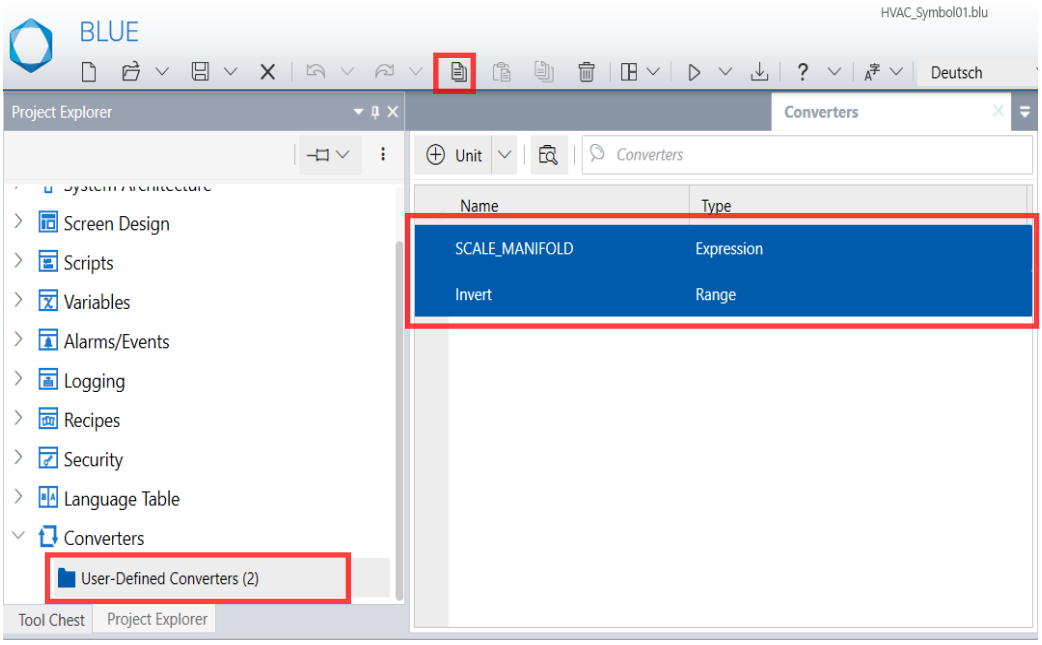
11. Open the downloaded project file, select “Language Table”. Select the displayed Language ID and click the copy icon from the global Toolbar



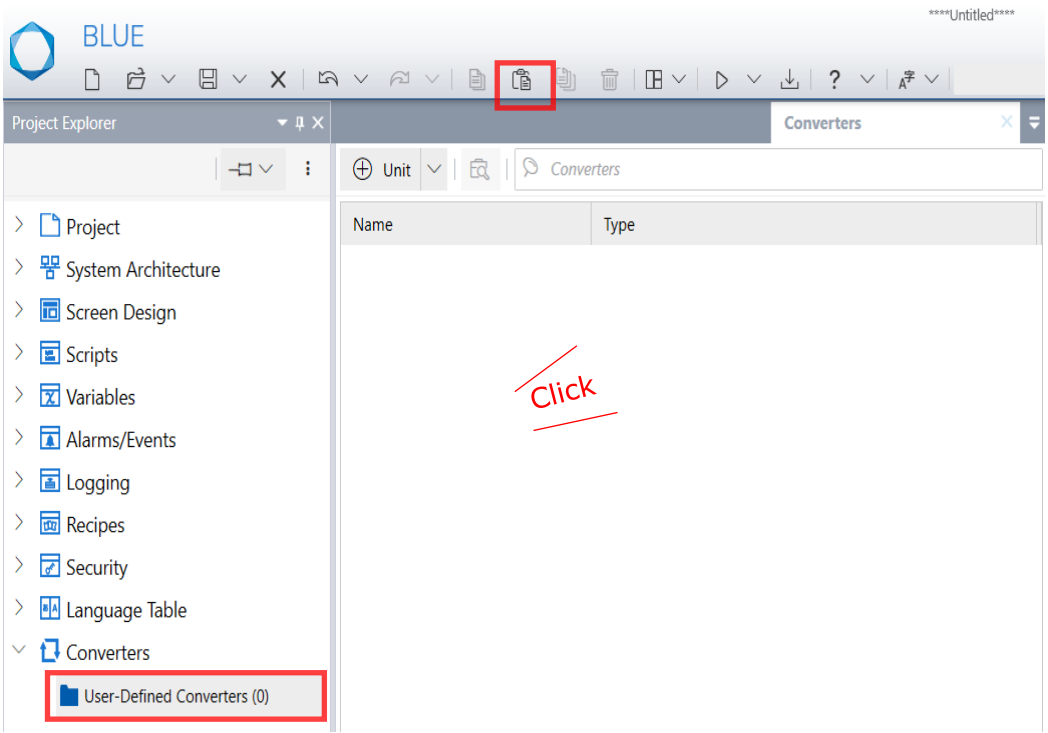
12. Open your project file, select “All Languages”. Click on paste icon from the global Tool.



13. Open the downloaded project file, select “User-Defined Converters”. Select the displayed converter and click the copy icon from the global Toolbar



14. Open your project file, select “User-Defined Converters”. Click on the Converter screen and click paste icon from the global Toolbar.



How to change HVAC Variables

When you replace default variable with other variable, make sure their value bindings are same as source. They are as below:

Screen name	Graphic Object	Tab/Property	Variable Value
RI_CO2_Heatpump	pipe6	Function>Basic CurrentValue	uiHMI_Status_Warm_Water_Pump
RI_CO2_Heatpump	pipe15	Function>Basic CurrentValue	uiHMI_Status_Warm_Water_Pump
RI_CO2_Heatpump	pipe18	Function>Basic CurrentValue	uiHMI_Status_Warm_Water_Pump
RI_CO2_Heatpump	Switch_Warm_water_pump	Function>Basic CurrentValue	uiHMI_Status_Warm_Water_Pump
Content2	Switch1	Function>Basic CurrentValue	uiHMI_vis_PID
RI_CO2_Heatpump	ContentDisplay1	Shape>Size/Location Visiblity	uiHMI_vis_PID
RI_CO2_Heatpump	Perc_Pump_KW	Shape>Size/Location Visiblity	uiHMI_vis_Temp_water
RI_CO2_Heatpump	Perc_Pump_WW	Shape>Size/Location Visiblity	uiHMI_vis_Temp_water
RI_CO2_Heatpump	Temp_KW_In	Shape>Size/Location Visiblity	uiHMI_vis_Temp_water
RI_CO2_Heatpump	Temp_KW_Out	Shape>Size/Location Visiblity	uiHMI_vis_Temp_water
RI_CO2_Heatpump	Temp_KW_Tank_bottom	Shape>Size/Location Visiblity	uiHMI_vis_Temp_water
RI_CO2_Heatpump	Temp_KW_Tank_middle	Shape>Size/Location Visiblity	uiHMI_vis_Temp_water
RI_CO2_Heatpump	Temp_KW_Tank_top	Shape>Size/Location Visiblity	uiHMI_vis_Temp_water
RI_CO2_Heatpump	Temp_WW_in	Shape>Size/Location Visiblity	uiHMI_vis_Temp_water

RI_CO2_Heatpump	Temp_WW_Out	Shape>Size/Location Visiblity	uiHMI_vis_Temp_water
RI_CO2_Heatpump	Temp_WW_Tank_bottom	Shape>Size/Location Visiblity	uiHMI_vis_Temp_water
RI_CO2_Heatpump	Temp_WW_Tank_middle	Shape>Size/Location Visiblity	uiHMI_vis_Temp_water
RI_CO2_Heatpump	Temp_WW_Tank_Top	Shape>Size/Location Visiblity	uiHMI_vis_Temp_water
RI_CO2_Heatpump	Num_HP	Shape>Size/Location Visiblity	uiHMI_vis_Press_Ref_circ
RI_CO2_Heatpump	Num_LP	Shape>Size/Location Visiblity	uiHMI_vis_Press_Ref_circ
RI_CO2_Heatpump	Perc_Comp	Shape>Size/Location Visiblity	uiHMI_vis_Press_Ref_circ
RI_CO2_Heatpump	Perc_EEV	Shape>Size/Location Visiblity	uiHMI_vis_Press_Ref_circ
RI_CO2_Heatpump	Temp_circ1	Shape>Size/Location Visiblity	uiHMI_vis_Temp_Ref_circ
RI_CO2_Heatpump	Temp_circ2	Shape>Size/Location Visiblity	uiHMI_vis_Temp_Ref_circ
RI_CO2_Heatpump	Temp_circ3	Shape>Size/Location Visiblity	uiHMI_vis_Temp_Ref_circ
RI_CO2_Heatpump	Temp_circ4	Shape>Size/Location Visiblity	uiHMI_vis_Temp_Ref_circ
RI_CO2_Heatpump	pipe3	Function>Basic CurrentValue	uiHMI_Status_Cold_water
RI_CO2_Heatpump	pipe16	Function>Basic CurrentValue	uiHMI_Status_Cold_water
RI_CO2_Heatpump	pipe17	Function>Basic CurrentValue	uiHMI_Status_Cold_water
RI_CO2_Heatpump	Switch_Cold_water_pump	Function>Basic CurrentValue	uiHMI_Status_Cold_water
RI_CO2_Heatpump	Pipe1	Function>Basic CurrentValue	uiHMI_Status_CO2_circuit
RI_CO2_Heatpump	Pipe2	Function>Basic CurrentValue	uiHMI_Status_CO2_circuit

RI_CO2_Heatpump	Pipe4	Function>Basic CurrentValue	uiHMI_Status_CO2_circuit
RI_CO2_Heatpump	Pipe5	Function>Basic CurrentValue	uiHMI_Status_CO2_circuit
RI_CO2_Heatpump	Pipe6	Function>Basic CurrentValue	uiHMI_Status_CO2_circuit
RI_CO2_Heatpump	Pipe7	Function>Basic CurrentValue	uiHMI_Status_CO2_circuit
RI_CO2_Heatpump	Pipe8	Function>Basic CurrentValue	uiHMI_Status_CO2_circuit
RI_CO2_Heatpump	Pipe9	Function>Basic CurrentValue	uiHMI_Status_CO2_circuit
RI_CO2_Heatpump	Pipe10	Function>Basic CurrentValue	uiHMI_Status_CO2_circuit
RI_CO2_Heatpump	Switch_CO2_Circuit	Function>Basic CurrentValue	uiHMI_Status_CO2_circuit
RI_Flow_Chart_heating_circuite	Switch_domestic_heating	Function>Basic CurrentValue	uiHMI_Status_domestic_heating
RI_Flow_Chart_heating_circuite	Switch_pump_heatpump	Function>Basic CurrentValue	uiHMI_Status_hp_waterpumpe
RI_Flow_Chart_heating_circuite	Switch_Pump_heating	Function>Basic CurrentValue	uiHMI_Status_hc_waterpumpe

Blockly Variable used with related screen. They are as below:

Screen name	Block	Variable
RI_CO2_Heatpump	Variable	uiHMI_Status_Warm_Water_Pump.Value
Content2	Valuechange	uiHMI_vis_PID.Value
RI_CO2_Heatpump	Valuechange	uiHMI_vis_PID.Value
RI_CO2_Heatpump	Valuechange	uiHMI_vis_Temp_water.Value
RI_CO2_Heatpump	Valuechange	uiHMI_vis_Temp_water.Value
RI_CO2_Heatpump	Valuechange	uiHMI_vis_Press_Ref_circ.Value
RI_CO2_Heatpump	Valuechange	uiHMI_vis_Press_Ref_circ.Value
RI_CO2_Heatpump	Valuechange	uiHMI_vis_Temp_Ref_circ.Value
RI_CO2_Heatpump	Valuechange	uiHMI_vis_Temp_Ref_circ.Value
RI_CO2_Heatpump	if	uiHMI_Status_Cold_water.Value
RI_CO2_Heatpump	if	uiHMI_Status_CO2_circuit.Value
RI_Flow_Chart_heating_circuite	if	uiHMI_Status_domestic_heating.Value
RI_Flow_Chart_heating_circuite	if	uiHMI_Status_domestic_heating.Value
RI_Flow_Chart_heating_circuite	if	uiHMI_Status_hp_waterpumpe.Value
RI_Flow_Chart_heating_circuite	if	uiHMI_Status_hp_waterpumpe.Value
RI_Flow_Chart_heating_circuite	if	uiHMI_Status_hp_waterpumpe.Value
RI_Flow_Chart_heating_circuite	if	uiHMI_Status_hc_waterpumpe.Value
RI_Flow_Chart_heating_circuite	if	uiHMI_Status_hc_waterpumpe.Value

1. In Project Explorer, select “User-Defined Converters”. Then Select SCALE_MANIFOLD

   In Properties, Click ... to open Expression Editor.

2. In Expression Editor, select the desired variable and its expression and click ok.